

POSTER PRESENTATION

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The incidence of penetrating trauma in London: have previously reported increases persisted in the last six years?

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From London Trauma Conference 2013
 London, UK. 10-13 December 2013

Background

We have previously reported a 20.5% annual rise in penetrating trauma attended by our pre-hospital trauma service between 1991 and 2006. Data from national registries was conflicting and surprisingly difficult to obtain. We established an increasing trend and predicted a continued rise. This study was performed to establish whether this prediction was correct. Rising penetrating trauma rates have implications for emergency medical care provision and policing.

Method

A retrospective review of the London Air Ambulance database was conducted to identify patients who sustained deliberate penetrating trauma from January 1st 2007 to December 31st 2012. Children, and patients who died in the pre-hospital phase were included. The number of pre-hospital resuscitative thoracotomies performed by the service was also recorded.

Results

The median number of penetrating trauma cases attended per year was 95, (range 14-220) in the period 1991-2006, and 352.5, (range 205-416) from 2007 to 2012. These figures represent 9.9% and 19.3% of the annual trauma caseload respectively. The mean increase per annum was 20.5% in the initial study, which equates to a mean increase of 10.3 cases per year ($R = 0.89$) over the 16 years, and 14% in the follow-up study, equivalent to 32.7 cases per year ($R = 0.81$). The corresponding increase in blunt trauma of 1.9%, 30.8 cases per year ($R = 0.86$) from 1991-2006, and 8.9% per year or 75.2 cases / year

($R=0.84$) between 2007-2012, was less than that observed for penetrating trauma ($p < 0.0001$).

There was a corresponding rise in the number of pre-hospital thoracotomies performed in the same period.

Conclusion

The rise in penetrating trauma that we reported in our pre-hospital trauma service in the period 1991-2006 has continued to rise in the period 2007-2013. This has considerable impact on the provision of trauma services and policing.

Published: 7 July 2014

doi:10.1186/1757-7241-22-S1-P3

Cite this article as: Crewdson et al.: The incidence of penetrating trauma in London: have previously reported increases persisted in the last six years? *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 2014 **22**(Suppl 1):P3.

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